# Apple-Works Forum

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**Support for AppleWorks and ///EZ Pieces Users**

# AppleWorks 3.0: Rumors and Facts

Claris Corporation did not have a booth at the Boston AppleFest '89 trade show, and many AppleWorks users were disheartened by their absence at the show. But don't misread Claris' actions and plans; the news is better than it seems.

Hidden on page 25 of the AppleFest Show Guide is an interesting item that raised some eyebrows in the AppleWorks community. That item describes Claris' planned exhibit at the show as follows: "Claris Corporation is presenting its new line of Apple II compatible software, AppleWorks GS and *AppleWorks 3.0*."

Is there an AppleWorks 3.0? And if there is, what does it offer that's missing from current incarnations of the program?

### There is an AppleWorks 3.0

There is an AppleWorks 3.0, but Claris is carefully avoiding a "vaporware" image by not talking about its unannounced product. **NAUG** is under a long-standing non-disclosure agreement with the company, so we are limited in what we can say about version 3.0, except that it is close to release and adds significant new features and power to all three AppleWorks modules. These enhancements include the most popular items on **NAUG**'s "AppleWorks Wish List" (see the June and September 1988 issues of the ***AppleWorks Forum***).

Version 3.0 is an evolutionary upgrade to AppleWorks. Despite its new features, AppleWorks 3.0 looks and acts like earlier versions of the program; AppleWorks users will immediately be comfortable with the upgraded program.

AppleWorks 3.0 is currently in the hands of beta testers around the country, and Claris is working with the developers of both hardware and software enhancements to insure a smooth transition to this new version of the program.

### Please Do Not Phone Claris

Until Claris releases the product, nobody at the company or at **NAUG** will comment further about AppleWorks 3.0; please do not call either organization for additional information. Claris is concerned that your calls will tie up their telephone lines and make it difficult for the company to maintain a high level of support for its existing products.

**NAUG** adjusted its ***AppleWorks Forum*** publication schedule so you will get complete news about the product as soon as Claris releases AppleWorks 3.0. Our articles will describe the enhancements, the upgrade offers available from Claris, and the impact of this program on existing AppleWorks enhancements from third party developers.

Meanwhile, be patient. We'll be able to tell you the whole story ... soon.

The ***National AppleWorks Users Group*** **(NAUG)** is an association that supports AppleWorks users. **NAUG** provides technical support and information about AppleWorks and enhancements to that program. Our primary means of communicating with members is through the monthly newsletter entitled the ***AppleWorks Forum***.

AppleWorks Forum

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# Letters to NAUG

## It's a Zero, Not the Letter "O"

Dear Cathleen,

I can usually install AppleWorks patches easily, but I had some difficulty installing Mark Munz's "No Change Patch" described in the March issue of the ***AppleWorks Forum***. *[Ed: When you quit AppleWorks, the program normally reminds you to save each file you printed, even if you made no changes to the file after the last save. The "No Change Patch" alters AppleWorks so it does not mark a file as "changed" when you print a document. Once you install this patch, AppleWorks does not tell you to save the files you printed.]*

The No Change Patch for AppleWorks 2.0 should read, in part,

```
BSAVE,SEG.M1,TØ,A768,L3,B$A119
```

It took me a while to realize it was TØ (zero), not TO (the letter "O"). In the future, can you slash the zeros in your articles?

David L. Conroy, Ph. D.
New York, New York

*[Ed: You were not alone in having difficulty installing this patch; NAUG received more than 20 letters from users who got error messages when they entered the letter "O" instead of the number zero when they typed this patch. Thanks for solving the problem and making your suggestion. In the future we will be careful to dot our i's, cross our t's, and slash our zeros.]*

---

## What is "Bird's Better Bye"?

Dear NAUG:

Two public domain disks I received from NAUG indicate they include "Bird's Better Bye". What is Bird's Better Bye and how do I use it?

Ware Lantz
Seattle, WA

*[Ed: Bird's Better Bye (BBB) is a ProDOS enhancement developed by Alan Bird of Beagle Bros. The normal ProDOS "Quit" routine generates a cryptic "Enter pathname of next application" message that appears when you quit AppleWorks. BBB replaces that message with a list of all system files on the current disk. You can use the arrow keys to highlight the next program you want to run and press the Return Key to launch the program. Alternatively, you can press the Tab Key and run a program from a different disk or from a RAM disk. (If the Tab Key doesn't work, press the Escape Key. Early versions of BBB use the Escape Key to switch between disk drives.)*

*BBB is a part of ProDOS. Every TimeOut disk comes with a BBB-enhanced copy of ProDOS, as do many of the disks from NAUG's Public Domain Library.*

*To install BBB, replace the file named ProDOS on your current boot disk with a BBB-enhanced copy of ProDOS. If you use AppleWorks on a floppy disk system, use a file copy program to replace ProDOS on your AppleWorks Startup Disk with a BBB-enhanced copy of ProDOS. Hard disk users should replace ProDOS in the Main Directory on their hard disk system.]*

---

## Using the AW 2 Expander

Dear Cathleen,

The March 1989 issue of the ***AppleWorks Forum*** includes a tip by Bruce Shanker that describes how to save space and fit more TimeOut modules onto an AppleWorks disk. The process involves deleting unnecessary files from the AppleWorks Program Disk.

A word of caution for AppleWorks users with Applied Engineering memory enhancement products: Do not delete the files described in that article until *after* you enhance your copy of AppleWorks with the AW 2 Expander software that comes with your Applied Engineering card. The AW 2 Expander looks for these files and crashes or generates an error message if it does not find the files on the AppleWorks disk.

Jim Greenberg
Melrose Park, Pennsylvania

## Right Justification in the Word Processor

Dear Cathleen,

I was surprised to read in the April issue of the ***AppleWorks Forum*** that there is no Right Justify Command in AppleWorks. If you issue an Apple-O command to go to the Options Menu and then issue a Justify Command (JU), AppleWorks automatically justifies the text. Isn't this "right justification"?

Sharon Marinelli
Harwinton, Connecticut

*[Ed: The Justify Command turns on "full justification", not "right justification".*

> *Full justification gives even left and right margins, as in this paragraph. AppleWorks increases the spaces between words in each line to align each edge of the text.*

> *This paragraph is right-justified. Right justification aligns the text so letters at the right-hand edge of each line are even but the left-hand edges of the lines are ragged.*

*AppleWorks 2.1 and earlier does not offer a Right Justify Command.]*

---

## AppleWorks 2.0 Data Base Bug

Dear NAUG,

A letter in the April 1989 issue of the ***AppleWorks Forum*** describes a problem with the AppleWorks data base module. The writer reports that when she issues an Apple-I command to insert new records, she gets a filled-in record instead of a blank record on the screen.

Your response suggests that she inadvertently used the Apple-V command to insert default entries that appear every time she issues an Apple-I command.

While your response is probably correct in her instance (the writer reports that only a few categories are filled in), I experienced a similar problem when I worked with a data base containing 900 records and 30 categories. A complete record would appear every time I issued an Apple-I command to insert new records. This problem disappeared when I used the same data file with AppleWorks 2.1, so I assume this is a bug in AppleWorks 2.0.

Leonard Warchol
Killeen, Texas

*[Ed: We are not aware of this problem with AppleWorks 2.0. Have other members encountered this problem?]*

---

## Solving the Apple-0 Mystery

Dear NAUG,

Once in a while I accidentally type an Apple-0 when I mean to type an Apple-9 to get to the end of a document. The cursor jumps to the bottom of the screen and the greater than sign (">") appears on the display. If I press the Escape Key or Return Key AppleWorks returns the cursor to the correct location on the screen. Is this an AppleWorks bug?

Timothy Bennett
St. Augustine, Florida

*[Ed: Tim, I think you are using an UltraMacros-enhanced copy of AppleWorks.*

*One of the features of UltraMacros is its ability to store a string of text into a "temporary macro" and re-use that text. Here is how to create and use a temporary macro:*

*Imagine that you are writing a paper on Freud. and you must repeatedly type the word "Freud" as you work. You want to let UltraMacros type "Freud" each time you need his name. Start by entering an Open-Apple-0 to indicate you want to type a temporary macro. Then enter the word "Freud" at the bottom of the screen and press the Return Key. Now, every time you type a Solid-Apple-0, UltraMacros will type "Freud" into the document. You can always replace the text stored in the Solid-Apple-0 macro by typing another Open-Apple-0 and entering new text.]*

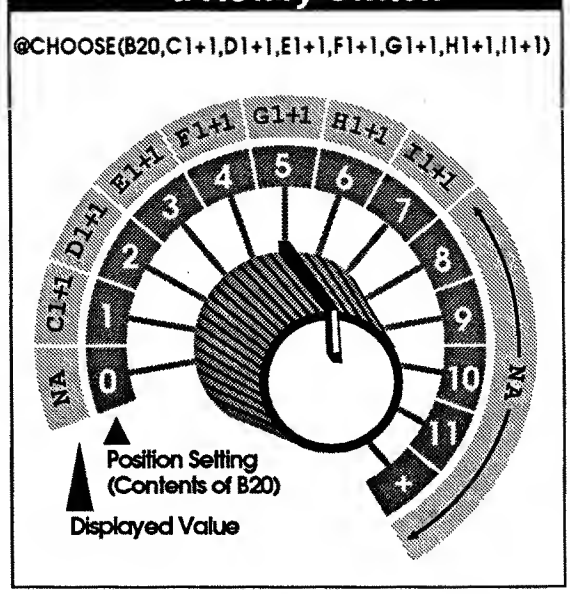
# Branching Spreadsheets: How to Use @CHOOSE

by Warren Williams and Cathleen Merritt

*This is the second article in a series that describes how to prepare "intelligent" spreadsheets — spreadsheets that "branch". This month the authors describe how to use the @CHOOSE function to add branching capability to AppleWorks.*

Last month we described how to use the @IF function to add decision-making capability to a spreadsheet. That article includes examples of spreadsheets that (a) "know" when to order more inventory for a business; (b) can compute different rates of sales commissions for different salespersons, and (c) can determine how many students perform successfully in a class. This month we describe the @CHOOSE function; another way to add decision-making capability to AppleWorks.

**Figure 1: @CHOOSE Acts Like a Rotary Switch**




### What Does It Do?

With two exceptions (@NA and @ERROR), every spreadsheet function generates a number. For example, @AVG computes the average of a series of cells and @SUM computes a total of those cells. @CHOOSE, like these other spreadsheet functions, generates a number.

You can think of the @CHOOSE statement as a rotary switch (see *Figure 1*) that has up to eleven different positions. You set the "switch" by issuing a "position number". AppleWorks will display the number, cell reference, or formula in that "position".

Let's examine a sample @CHOOSE statement and see how it works.

The formula @CHOOSE (A1,1,3,5,7,9) checks the contents of cell A1 to determine the "position setting". If A1 contains a 1, the formula displays the first entry in the list of entries that start after the reference to cell A1. That is, if cell A1 contains a 1, AppleWorks replaces the formula with the number 1. If cell A1 contains a 2, the formula displays the number 3. If cell A1 contains a 3, the formula displays the number 5. And so on. In this case, if cell A1 contains a zero or any number larger than 5, the formula displays "NA" to show that the entry is "Not Available".

*Figure 1* depicts a more complex @CHOOSE statement. Consider what happens when you enter the following formula into cell B10:

```
@CHOOSE(B20,C1+1,D1+1,E1+1,F1+1,G1+1,H1+1,I1+1)
```

AppleWorks replaces this formula with a number, so the formula determines what number appears in cell B10. The formula says, "Check the contents of cell B20. If B20 contains a zero or a number greater than eight, display 'NA'. If cell B20 contains a number between one and seven, turn the switch to the correct position, select the

## Figure 2: Using @CHOOSE to Calculate Discounts

```
 1|                    Industrial Sales Ltd.
 2|                          Box 808
 3|                    Smithtown, NY  10480
 4|
 5|  Date:  April 6, 1991
 6|  To:    John Merritt                                  Customer Lvl
 7|  From:  Lisa Williams                                       3
 8|  Re:    Quotation
 9|                                                                  Cell G7
10|
11|        The following is a quotation for filtration material
12|        for your firm. Prices are valid for 45 days from
13|        the date of the quotation.
14|
15|
16|                                              Unit  Unit      Total
17|Qty  Unit Stock#   Description                 List  Sale      Cost
18|---- ---- -------- ---------------------------- ----- ----- -------------
19|1000 ft^2 01-3-001 Wire Cloth/Stnless/.001 Mesh 48.00 36.00   $36,000.00
20| 300 ft^2 30-5-033 Wire Cloth/Normal/.001 Mesh  61.00 45.75   $13,725.00
21|1000 ft^2 99-2-002 Plastic Mesh/Nylon Flr/.010   7.80  5.85    $5,850.00
22|
23|                          @CHOOSE(G7,F19,F19*.75,F19*.6)
24|                                                                (A21*G21)
25|-----------------------------------------------------------------------
26|        All Prices F.O.B. Smithtown                    TOTAL:   $55,575.00
27|        Terms: Net 30 Days
28|                                                          @SUM(H18..H25)
```

## Figure 3: Real Estate Assessment Spreadsheet

```
 1|City of Pontiac
 2|Real Estate Assessment Worksheet
 3|
 4|-----------------------------------------------------------------------
 5|          Date: March 4, 1984          |Property Type:   3
 6|     Appraiser: Jane Dawson            |
 7|      Property: 203 Rightway Drive     |     (1 = Single Family Home)
 8| Last Assessed: 1986                  |     (2 = Two Family Home)
 9|Assessed Value: $104,280              |     (3 = Multiple Family Home)
10|-----------------------------------------------------------------------
11|Estimated Selling Price    -   $188,000                Cell H5
12|      Adjustment Factor    -        75%
13|         Assessed Value    -   $141,000
14|-----------------------------------------------------------------------
15|                      (D11*D12)        @CHOOSE(H5,1,.8,.75)
```

## Figure 4: Withholding Tax Spreadsheet

```
 1|
 2|                 Weekly Withholding Calculation
 3|                 ==============================
 4|
 5|                Number of  Annual   Weekly   Withheld Net Weekly
 6|Name            Deductions Salary   Salary   Weekly   Salary
 7|-------------- ---------- -------  -------  -------  ----------
 8|Baumann, Scott     0      $31,500  $605.77  $157.50  $448.27
 9|Frederick, Paul    1      $50,000  $961.54  $211.54  $750.00
10|Jonson, Adam       0      $29,000  $557.69  $145.00  $412.69
11|Silfen, Arthur     2      $37,300  $717.31  $143.46  $573.85
12|Williams, Lisa     3      $39,800  $765.38  $137.77  $627.61
13|                                   (D8/52)   (E10-F10)
                 @ROUND(@CHOOSE(B9+1,E9*.26,E9*.2,E9*.18,E9*.16),2)
```

appropriate formula, and display the result of that calculation in cell B10."

### Structure of @CHOOSE

The simplest @CHOOSE formulas have two parts: a cell reference that determines the correct position setting, and the response stored in each position. The structure looks like this:

```
@CHOOSE(position setting, position1,
position2, position3, ... , position11)
```

If the tested cell contains a 1, the number in "position1" replaces the @CHOOSE formula. If the tested cell contains a 2, the number in "position2" replaces the formula. And so on.

If each item on the list is short, the list can include up to 11 entries; the number of entries in the list defines the number of switch settings available. If you enter two numbers after the "position setting" (e.g., @CHOOSE (B10,5,6)), you define a two-position switch that can only accommodate settings of "1" and "2". If you enter five numbers or formulas after the "position setting" (e.g., @CHOOSE (E3,10,20,30, 40,50)), you define a five-position switch that can accommodate position settings of 1, 2, 3, 4, or 5. If the tested cell contains a zero or a number greater than the number of choices in the list of entries, "NA" appears in place of the @CHOOSE formula. For example, the formula @CHOOSE (A1,3,5,7) generates an "NA" if cell A1 contains a zero or any number greater than three.

### An Example: Cost Quotations

*Figure 2* contains a sample spreadsheet that uses the @CHOOSE function. This spreadsheet helps a salesperson compute cost quotations for clients.

In most industrial sales, clients pay different prices for a product, depending on the overall volume generated by that client. For example, a "Level 1" customer might pay list prices, a "Level 3" customer might get a 40 percent discount from those prices. The spreadsheet in *Figure 2* uses the @CHOOSE function to compute the prices paid by different customers.

The spreadsheet in *Figure 2* gets its branching capability from the @CHOOSE formulas in cells G19 through G24. For example, the formula @CHOOSE(G7,F19,F19*.75,F19*.6) in cell G19 says, "Check the contents of cell G7 (the Customer Level cell). If G7 contains a one, charge the price in cell F19, the full list price. If G7 contains a two, charge 75 percent of list price. If G7 contains a three, charge 60 percent of list price. If cell G7 contains a zero or a number greater than four, something is wrong and you should display 'NA'."

As you can see from this example, the items on the "list" can be numbers, cell references, or formulas. The "position switch" can also be a formula. For example, @CHOOSE(@ROUND(B12/3,0),1,2,3) is an acceptable formula that rounds the value of B12/3 to the nearest whole number and then displays a 1, 2, or 3 depending on the results of this calculation.

### Other Examples of @CHOOSE

*Figure 3* presents another spreadsheet that uses @CHOOSE statements to make decisions. This is a simplified model of a tax assessor's spreadsheet that uses "codes" in cell H5 to classify residential properties into different categories. A code of one indicates a single-family home, two indicates a two-family home, and three represents a multiple-family dwelling.

The spreadsheet in *Figure 3* uses the code to determine the "adjustment factor" the assessor applies to the estimated selling price. In this example, the city assesses single-family homes at their full estimated selling price, two-family homes at 80 percent of their selling price, and multiple-family homes at 75 percent of their selling price. The @CHOOSE formula in cell D12 selects the appropriate adjustment factor based on the property type code in cell H5. The formula in cell D13 multiplies the estimated selling price by the adjustment factor to determine the assessed value.

*Figure 4* presents a third example of a spreadsheet that uses the @CHOOSE function. This figure uses @CHOOSE statements to compute the correct rate of income tax withholding, depending on the number of deductions claimed by each employee. Note two interesting elements in this example:

First, the values in Column B (the number of deductions) can be zeros. Thus, the @CHOOSE statements in column E add a "1" to each entry in Column B before choosing the correct entry from the list of formulas in the @CHOOSE statement. This is one way to handle values of zero in @CHOOSE statements.

Second, note the use of the @ROUND function in this model. The @ROUND function insures that the underlying computed dollar value of the weekly withholding matches the value displayed on the screen. (For more information about the @ROUND function, see the article entitled "Using @ROUND in the Spreadsheet" in the November 1987 issue of the ***AppleWorks Forum***.)

### Conclusion

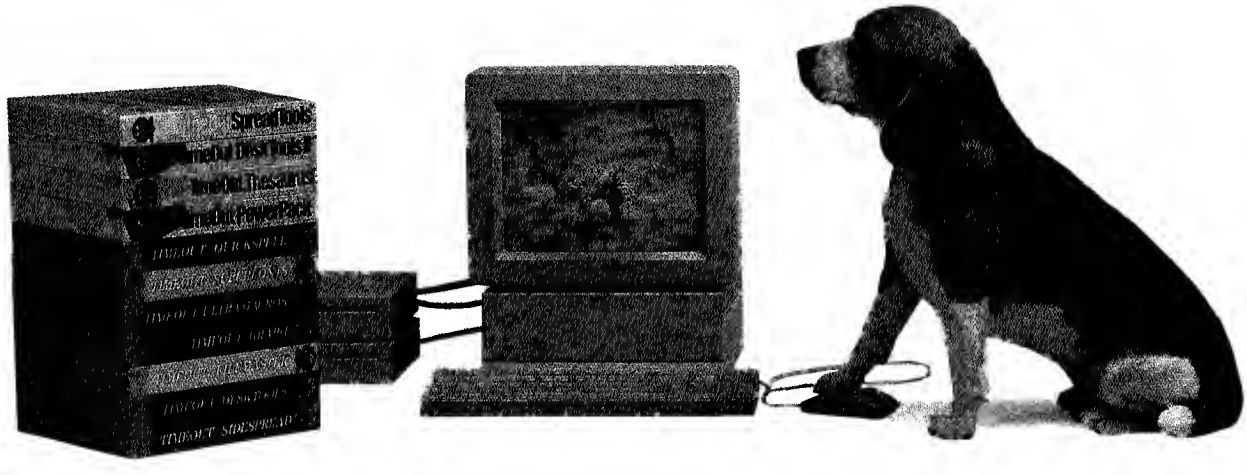
This article demonstrates three applications of the @CHOOSE function: To compute discounts, classify property, and determine withholding taxes.

The branching capability of the @CHOOSE function adds significant power and flexibility to the AppleWorks spreadsheet module.

*[The formulas and examples in this article are simplified to let the authors focus on the syntax and applications of the @CHOOSE function. Do not use these formulas to prepare invoices, compute assessments, or calculate withholding tax deductions.]*

*[Dr. Warren Williams teaches in the Educational Technology program at Eastern Michigan University. He is a technical advisor to NAUG and a frequent contributor to the **AppleWorks Forum**.]*

# UNLEASH THE POWER.™



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# How to Extend the Life of Printer Ribbons

by William Marriott and Helen Ullmann

Most printer ribbons still have dozens, if not hundreds, of pages left in them long after their print becomes faint. This article describes two ways you extend the life of these ribbons, and an additional technique you can use with the ImageWriter LQ.

### How to Restore Used Ribbons

One technique you can use with almost any brand of cartridge is to spray a lubricant called WD-40 (available from most hardware stores) on the ribbon. WD-40 serves as both a solvent and lubricant; it lets the remaining ink on the ribbon flow into the used areas. Follow these steps to restore your ribbons with WD-40:

1. Open the top of the plastic case enclosing the ribbon. Do not disturb the position of the ribbon in the bottom of the case.

   Some manufacturers ultrasonically seal the case together and these cases break when you take them apart. You cannot use the WD-40 technique with ultrasonically sealed ribbons.

2. Lightly spray WD-40 on top of the exposed ribbon. Get the ribbon slightly damp, not wet.

3. Close the case and put the ribbon in a plastic Zip Lock-style bag. Store it in the bag overnight before use.

### Re-ink Your Ribbons

Another technique is to re-ink your black ribbons. You will need both a re-inker and special dot matrix printer ink for this process. (Do not use other inks. Dot matrix printer ink includes a lubricant for the pins on the print head. This is the same reason you should not run your printer without a ribbon; the lubricant for the print head is in the ink.)

If you have an ImageWriter I or II, the most popular re-inker is the MacInker ($42, including ink, from Computer Friends, 14250 NW Science Park Drive, Portland, Oregon 97229, (800) 547-3303). You put the ribbon on the MacInker, add some ink to a reservoir, plug it in, and the device applies ink to the ribbon. Complete directions come with the product. However, don't wear white gloves or plan job interviews immediately after you re-ink a couple of ribbons.

### ImageWriter LQ Techniques

The ImageWriter LQ is more sophisticated than typical dot matrix printers, and makes efficient use of its black ribbon. When you insert a black ribbon into the ImageWriter LQ, a tab on the ribbon depresses a switch in the printer. That tells the printer to use a different segment of the ribbon to print each page. The ImageWriter LQ uses the top quarter of the ribbon to print the first page, the second quarter of the ribbon to print the second page, and so on.

Unfortunately, the cycle restarts with the top portion of the ribbon each time you turn on the printer. If you turn your ImageWriter LQ on and off frequently, you will deplete the ink from the top of the ribbon, and almost never use the lower bands.

One way to extend the life of ImageWriter LQ ribbons is to turn the printer on and leave it on. The ImageWriter LQ is a sturdy printer designed for long periods of use; leaving it on will not damage the printer and will let the device make efficient use of its expensive ribbons.

### Recovering Used ImageWriter LQ Ribbons

If you turn your ImageWriter LQ on and off, you probably have ribbons with the top part dry but

where the rest of the ribbon remains usable. You can use the rest of the ribbon by tricking your printer into thinking you have a color ribbon and then telling AppleWorks to print in color.

Compare a black ImageWriter LQ ribbon with a color ribbon and you will find that the black ribbon has a tab on the right-hand side that is missing from the color ribbon. That is the tab that tells the printer you have a black ribbon. Break off the tab. Now the printer thinks you have a color ribbon.

Next, you must tell AppleWorks to use a different "color" band on the ribbon.

### How to Tell AppleWorks to Print in Color

If you have an Apple IIe or IIGS, the easiest way to specify color printing of an entire document is to put the command for color in the printer interface card settings for the printer. Follow these steps to insert the code (We assume you have an Apple Super Serial card. If you have another card, replace the code Control-I 8ØN in the following directions with the correct code for your interface card):

1. Go to the AppleWorks Main Menu and select #5, "Other Activities".
2. At the Other Activities Menu, select #7, "Specify information about your printer(s)".
3. At the Printer Information Menu, indicate you want to change the settings for your printer.
4. With the printer information on the screen, select #5 and indicate you want to change the printer interface card setting.
5. Indicate you want to change the printer interface card setting. Use the code Control-I 8ØNK1, when you want to use the second band on the ribbon. When that band is used up, enter Control-I 8ØNK2, to use the third band, and when that band is gone, use Control-I 8ØNK3 to print on the final band. (All "Ø" characters are zeros, not the letter "O".) Type a shifted-6 (a caret mark) to indicate you are done entering the interface card setting.
6. Enter an Apple-Q. Then press the Escape Key to return to the Main Menu. Be patient, AppleWorks will write the new printer interface settings on the AppleWorks Program Disk.

### If You Have an Apple IIc

The technique described above does not work on an Apple IIc; AppleWorks recognizes the IIc and knows there are no interface cards in the computer.

If you have a IIc, you can send the color code from the spreadsheet module. Follow these steps:

1. Create a new spreadsheet and issue an Apple-O command to get to the Options Menu.
2. Issue an SC command and enter the code Escape K1, Escape K2, or Escape K3 to select the portion of the ribbon you want to use. Issue an Apple-S command to save this spreadsheet on a disk.
3. Print the blank spreadsheet; all following output will use the portion of the ribbon you specify.

### Conclusion

These techniques might seem like unnecessary frugalities to your colleagues, but many of us who print long documents or make heavy use of the graphic capabilities of our printers with SuperFonts or AppleWorks GS will appreciate these savings.

*[Helen Ullmann uses AppleWorks to organize and publish her genealogy research.]*

## Claris Moves

Claris Corporation, publisher of AppleWorks, AppleWorks Network, and AppleWorks GS, recently moved from Mountain View, California to larger facilities in Santa Clara.

Claris' new address is:

**Claris Corporation**
**5201 Patrick Henry Drive**
**Santa Clara, California 95052-8168**

New telephone numbers:

| | |
|---|---|
| **Customer Service** | **(408) 727-8227** |
| **Technical Support** | **(408) 727-9054** |
| **Corporate Offices** | **(408) 987-7000** |


## NAUG Classifieds

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# How to Install an Operating System and Organize Your Hard Drive

by Gary R. Morrison

*This is the fourth in a series of articles that describe how to select, install, and use a hard disk drive with AppleWorks. Last month, Dr. Morrison described how to connect and partition your hard disk. This month he describes how to install an operating system and establish subdirectories on the disk.*

Like most application programs, AppleWorks does not know how to run your disk drives. All application programs use an "operating system" to manage the drives, so you must always load an operating system into your computer's memory before you can use any applications program.

There are a number of operating systems available for the Apple II; the most popular are ProDOS (for "Professional Disk Operating System") and GS/OS (for "Apple IIGS Operating System").

ProDOS works on any Apple II or Apple II-compatible with at least 64K of memory. GS/OS is a larger, more powerful system that only works on Apple IIGS computers. GS/OS includes a complete copy of ProDOS as part of its larger system, so you can run AppleWorks on the IIGS even when you use GS/OS.

When you run AppleWorks from a floppy disk drive, you boot the computer with an AppleWorks Startup Disk that contains ProDOS. This process loads ProDOS into memory before the computer starts running AppleWorks.

Hard disks are faster than floppy disks, so once you own a hard disk, you should change your method of operation and boot the computer from the hard disk system instead of from a floppy disk. Thus, you must install a copy of the operating system onto the hard disk unit.

### Which Operating System Should You Install?

If you use an Apple IIe, IIc, or Laser computer, you should install the latest version of ProDOS 8. Apple IIGS owners can install either GS/OS or ProDOS 8. I recommend installing GS/OS, which is more powerful, lets you run both 8-bit programs like AppleWorks and 16-bit programs like AppleWorks GS, and includes a complete copy of ProDOS 8.

### How to Get an Operating System

The current version of ProDOS 8 is version 1.7. If you have AppleWorks 2.1 or a recent copy of a TimeOut disk, you already have version 1.7; it is on every AppleWorks 2.1 and every TimeOut disk. You can also get ProDOS 8 version 1.7 free from any Apple dealer or for $4 plus $2 s/h from the **NAUG** Public Domain Library.

The current version of GS/OS is Apple IIGS System Software version 4.0. GS/OS costs $39.95 from Apple dealers or $12 plus $3 s/h from the **NAUG** Public Domain Library. The Apple dealer version includes comprehensive documentation; the copies from **NAUG** include the complete system but no documentation.

### How to Install ProDOS 8

To install ProDOS 8, use any file copy program to copy the files ProDOS and BASIC.SYSTEM onto the hard drive. If you partitioned your drive into

## What Happens When You Boot ProDOS?

ProDOS is a sophisticated operating system that is easy to use and understand. Here is what happens when you boot your computer with a disk that contains ProDOS.

First, ProDOS displays its version number on the screen and loads into memory. Second, ProDOS loads and executes the first file on the disk with the system name XXXXXXX.SYSTEM (e.g., APLWORKS.SYSTEM, RPRWRKS.SYSTEM, ULTRA.SYSTEM, BASIC.SYSTEM). If ProDOS cannot find such a file, it displays the error message "UNABLE TO FIND A .SYSTEM FILE".

If the file BASIC.SYSTEM is the first .SYSTEM file on the disk, ProDOS loads in BASIC, looks for a BASIC program named STARTUP, and runs that program. If there is no STARTUP file on the disk, BASIC stops and displays the Applesoft "]" prompt.

two or more volumes, copy those files onto the first volume; you cannot boot the computer from other volumes. ProDOS must be the first file copied into this volume. Then you can boot your computer from the hard drive.

### How to Install GS/OS

GS/OS consists of numerous files on two 3.5-inch disks. Fortunately, Apple includes an installation program that installs GS/OS on your drive. Follow these steps to install GS/OS:

1. Boot your computer with the GS/OS System Disk.
2. Eject the System Disk and insert the System Tools Disk.
3. Double-click on the System Tools Disk.
4. Double-click on the "Installer" icon.
5. Click on the "Volume" button until the program displays the correct volume at the top of the screen. You want to install GS/OS on the first volume on the hard disk, the volume you probably called HARD1 or PROGRAMS.
6. Click on "Add New Fonts" and then click on "Install" to install the basic system fonts on your hard disk. Next, click on "Advanced Disk Utility" and click on "Install". Repeat this process to install each of the accessories you own. For example, most AppleWorks users do not have an Apple MIDI card, so you should not install that device driver on your copy of GS/OS.

   There will be a number of options you don't know whether or not you own. If in doubt, install the option. It's better to waste a little space on your hard disk than not have a driver you need when you use your computer.
7. Click on "Quit" to indicate you are done using the Installer program.

### Test Your Setup

Now it is time to see if your hard disk system works. Warm boot your computer by holding down the Control and Open-Apple Keys; then press and release the Reset Key. Your system should boot from the hard disk drive.

*ProDOS 8* — If you installed ProDOS 8, the screen should show the BASIC "]" prompt and the flashing cursor. If it does not, you should determine if you have a physical problem with your setup or a faulty installation of ProDOS and BASIC.SYSTEM on the disk.

If the disk drive activity light comes on, the physical setup is probably correct. If the disk drive light does not come on, check to see that the drive is getting power and that you seated the drive interface card firmly in slot 7. If you have a IIGS, make certain the interface card setting on the Control Panel says "Scan".

If the drive light comes on but your computer does not boot, make certain you installed the operating system and BASIC.SYSTEM into the correct volume on the hard disk drive.

*GS/OS* — If you installed GS/OS, the screen should display the GS/OS Finder desktop, with pictures of disk drives at the right-hand edge of the screen. Move the mouse and see if the pointer moves. If the screen appears and the pointer

**Figure 1: Hierarchical Structure of Books and Hard Disks**

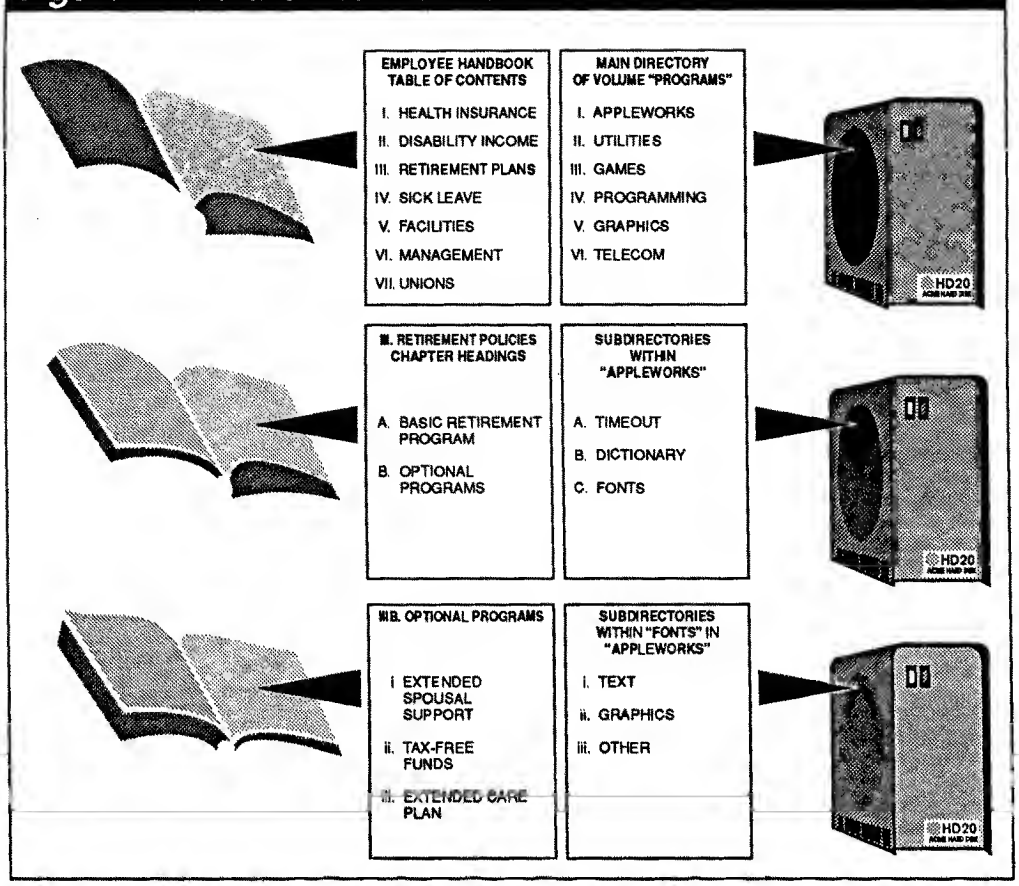
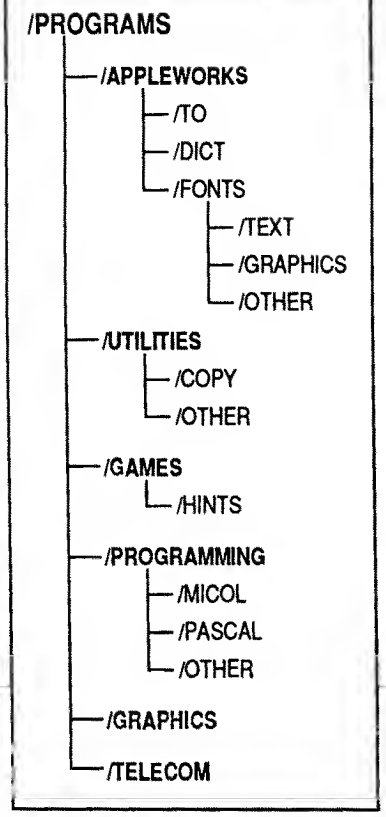



**Figure 2: Hard Disk Directory "Map"**




moves, you probably installed GS/OS correctly. Otherwise, check if the interface card setting on the Control Panel says "Scan"; then repeat the installation process.

### Organize Your Disk

There is one more important step before you can store programs and data on your hard disk; you must establish a structure of "directories" and "subdirectories" for each volume. There are at least two reasons you must use these structures:

First, a hard disk has tremendous capacity. (You can store approximately 1,000 two-page AppleWorks word processor documents on a single 20-megabyte hard disk.) But how would you find the correct file? Can you imagine scrolling through a list of 1,000 items every time you tell AppleWorks you want to "Add Files to the Desktop"?

Second, AppleWorks uses the ProDOS operating system, which limits the number of files it can store in a single directory or subdirectory. Current versions of ProDOS can store 51 files in a Main Directory. AppleWorks allows a maximum of approximately 160 files in each subdirectory, so you will have to establish subdirectories if you want to use the full capacity of your hard disk system.

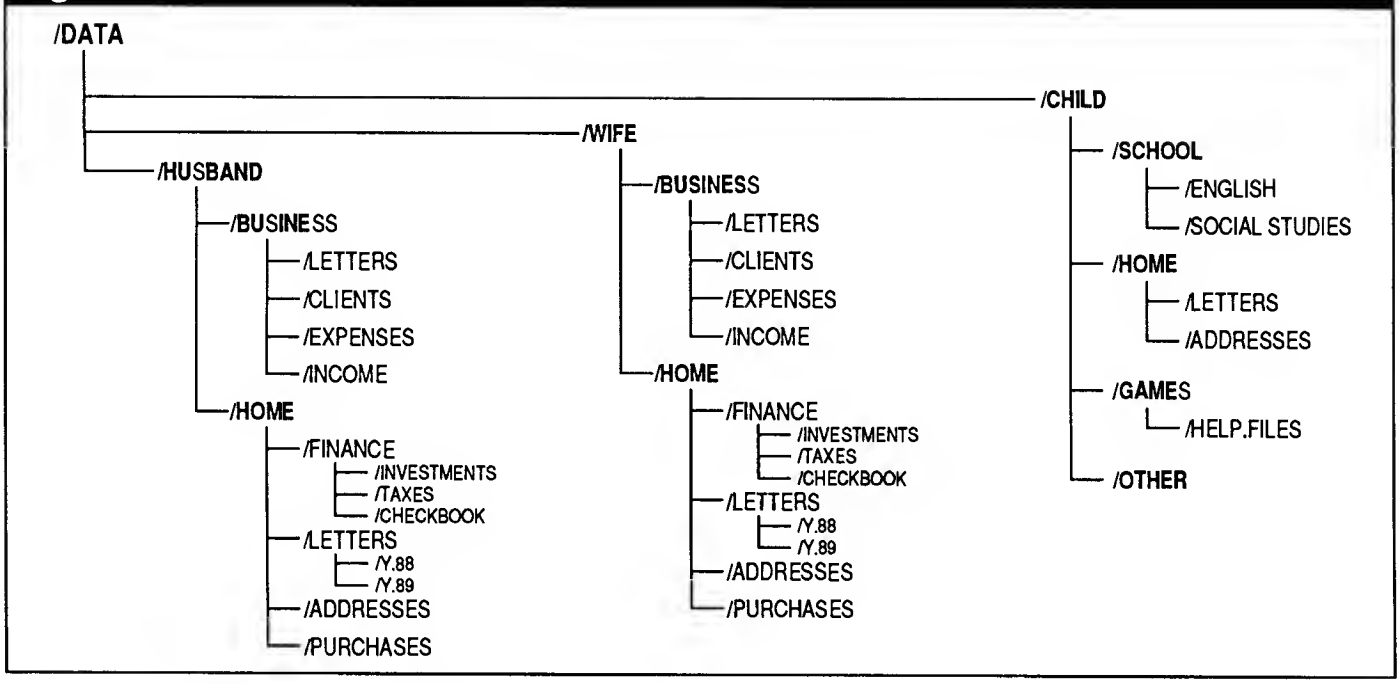
But what are directories and subdirectories?

### Directories and Subdirectories

Directories and subdirectories are part of an indexing system that help you locate data stored among the many files you can fit on a single hard disk. This organizational structure corresponds to the Table of Contents one might find in a large reference book like an Employees Handbook.

Consider the indexing scheme in an Employees Handbook. Imagine that the book consists of ten major sections: health insurance, disability income, retirement policies, sick leave policies, and so forth. The main Table of Contents includes a reference to each section. When you turn to the section on Retirement Policies, you find a Table of Con-

**Figure 3: Extended Structure for Volume "/DATA"**




tents for that section that includes two entries: references to the basic retirement plan and to the optional plans. The optional plans are further divided into three sections for each option. *Figure 1* depicts the Tables of Contents in this Handbook.

You can think of your hard disk like a large manual that needs some type of organization. The hard disk has a "Main Directory" that functions like a Table of Contents. The Main Directory lists the major sections (called "subdirectories") on the disk volume. Each subdirectory includes a list of files in that area. If a section of the book is too large and itself has a long Table of Contents, the author can divide that section into separate sub-sections, each of which has its own Table of Contents. Thus, each volume on your hard disk has one Main Directory and numerous subdirectories. Each subdirectory contains a list of files and/or subordinate subdirectories.

The right-hand portion of *Figure 1* depicts a simple subdirectory structure used to organize the data files on a hard disk system.

You want to be able to visualize the structure of the subdirectories on your hard disk without drawing the pictures that appear in *Figure 1*. *Figure 2* shows a "map" of the directories on one volume of a hard disk system. The top of the map displays the name of the volume, /PROGRAMS. This map indicates there are six subdirectories in the Main Directory: /APPLEWORKS, /UTILITIES, /GRAPHICS, /PROGRAMMING, /GAMES, and /TELECOM.

The lines extending down from each subdirectory indicate further divisions of each subdirectory. For example, the subdirectory APPLEWORKS contains three subdirectories called /TO (for TimeOut), /DICT, and /FONTS. The subdirectory /FONTS contains three subdirectories called /TEXT, /GRAPHICS, and /OTHER. From this point on, I will use this mapping technique to depict the subdirectory structure for a disk drive volume.

### Establish a Structure for Each Volume

Your next task it to establish a subdirectory structure for each volume on the disk. Let me suggest a simple strategy:

Sort all your floppy disks into two piles: Program Disks and Data Disks. Set the Data Disks aside for now and work with the Program Disks. Figure out which Program Disks "go together" and sort the Program Disks into different piles. For example, you should have AppleWorks and all the TimeOut disks in a single pile. You should have Copy II+ and all your other utility programs in a separate

pile. If you use a page layout program like Publish It!, put your page layout program disks in a third pile. And so on.

Now repeat the process with your data disks. If more than one person uses the computer, put each person's disks in a separate pile. Then sub-divide each person's pile in a meaningful fashion. Consider the recommended subdirectory structure for data disks that appears in *Figure 3*. Note that I group the files first by who uses the file and then by the file's function. Some AppleWorks users prefer to group all word processor, data base, and spreadsheet files into separate subdirectories, but I prefer to group the files by their use, not by the AppleWorks module I use with each file.

### Rules for Subdirectory Names

Now it is time to create the subdirectories on each volume of your hard disk. While there are many ways to create subdirectories, all subdirectory names must follow certain rules. That is, subdirectory names can be up to 15 characters long, must start with a letter, and cannot contain spaces or punctuation marks other than a period.

While subdirectory names can include up to 15 characters, try to keep the subdirectory names short. Use abbreviations and other techniques to help you shorten these names; that saves typing when you have to enter ProDOS pathnames with AppleWorks.

### How to Create ProDOS 8 Subdirectories

I prefer to use a disk utility program like Copy II+, the System Disk that came with your computer, or FileMaster to establish ProDOS 8 subdirectories. Here are the steps necessary to use Copy II+ to establish subdirectories; you can generalize these techniques to any popular disk utility program.

1. Boot your computer from the hard disk drive. The BASIC "]" prompt and flashing cursor should appear on the screen.
2. Insert your Copy II+ disk in a drive and type "-UTIL.SYSTEM,S6,D1" (This assumes you put Copy II+ in the drive connected to Slot 6, Drive 1. Substitute the correct slot number and drive number for your setup. Do not type the quotation marks). Then press the Return Key.
3. The Copy II+ Main Menu appears on the screen. Select "Create Subdirectory".
4. Copy II+ displays a list of all disk drives connected to the computer. Select slot 7, drive 1.
5. Copy II+ displays a "map" of the subdirectories on your drive. Since you have not yet established subdirectories, only the volume name appears on the screen. Press the Return Key.
6. Enter the name of the first subdirectory and press the Return Key. Repeat this process as often as necessary to set up all the first levels of subdirectories. If you want to set up a subdirectory for a subdirectory, repeat step #5, but highlight the subdirectory you want to divide.

### How to Create GS/OS Subdirectories

You can also use Copy II+ to establish a structure of subdirectories under GS/OS, but I prefer to use the GS/OS Finder and the mouse on my IIGS to prepare subdirectories.

GS/OS uses the Apple IIGS desktop metaphor of "icons" and "folders". An "icon" is a picture that represents a device or document. A "folder" is a subdirectory that holds other folders (subdirectories) or files.

Follow these steps to use the GS/OS Finder to establish subdirectories on one volume. Then repeat the steps to establish subdirectories on any remaining volumes.

1. Boot your computer from your hard disk and wait for the GS/OS Finder desktop to appear on the screen. If you partitioned your disk drive into separate volumes, the desktop will present a separate icon for each volume.
2. With the Finder desktop on the screen, move the mouse so the pointer is on the icon for one volume and double-click. A directory of the files on the volume will appear on the screen.
3. Hold down the Command Key and press the letter "N" to create a new folder. The folder will automatically be named "UNTITLED". This creates a new subdirectory.

4. Move the mouse so the pointer is on the word "UNTITLED" and double-click. Type a new name for the folder and press the Return Key.
5. You can create additional subdirectories within this folder by issuing another Command-N.
6. When you are done creating subdirectories within this folder, click on the "Close Box" in the upper left-hand corner of the window until you remove all the folders from the desktop. Repeat this process as necessary to create all the subdirectories on the volume.

### How to Delete Subdirectories in ProDOS 8

There will be times you change your mind and want to delete one or more subdirectories from a volume. However, most utility programs only let you delete a subdirectory that is "empty"; i.e., a subdirectory that has no files or other subdirectories in its catalog. With these programs, you must first delete all the files in the subdirectory before you can delete the subdirectory itself.

Copy II+ is an exception; it lets you delete a subdirectory and all its associated files in a single operation. Select "Delete Files" from the Copy II+ Main Menu, then highlight the next higher directory from the disk map. Select the subdirectory you want to delete, and Copy II+ will delete the files from that subdirectory and then delete the subdirectory itself from the disk.

An example will clarify this process. Look at the diagram in *Figure 3* and imagine you want to delete the /LETTERS subdirectory from the Husband's portion of the disk. To delete that subdirectory, select Delete Files from the Copy II+ menu and highlight /BUSINESS under the /HUSBAND area. Then delete the subdirectory /LETTERS from the catalog. Copy II+ will delete all the files from that area and then delete the /LETTERS subdirectory from the /BUSINESS area.

Be cautious when using Copy II+ to delete subdirectories. It gives no warning that you are about to delete all files and associated subdirectories from the disk when you delete a complete subdirectory.

### How to Delete Subdirectories in GS/OS

It's also easy to delete subdirectories (folders) in GS/OS. Here's how:

1. Boot your computer to get to the GS/OS Finder desktop.
2. Use mouse movements and clicks to display the folder you want to delete. Do not open that folder.
3. Put the arrow on the folder you want to delete, press the mouse button, and drag the folder to the trash. Then release the mouse button.The trash can bulges to indicate it contains data you want to delete from the disk. However, the computer does not actually delete the files until you select "Empty Trash" from the GS/OS "Special" menu, or start up a program. Be cautious when you delete a folder; make certain you don't unintentionally delete important files from the disk. If you delete an important file, double-click on the trash icon; if you see the folder's icon in the trash, drag it back to the hard disk.

### Summary

You can now boot your computer from your hard disk and get into BASIC. You have established subdirectories on the drive and are ready to copy your program and data files onto your system. But don't copy your files yet ... there are some additional techniques you can learn. Next month I will describe how to configure your programs so they run on your hard disk, how to copy your files onto that disk, and how to use pathnames to access your data files.

*[Dr. Gary R. Morrison is an Associate Professor at Memphis State University. He is author of the book "ProDOS 8 and 16", RepairWorks, and numerous other articles and software.]*

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# Relative Speed of AppleWorks on Different Systems

by Warren Williams

In some ways, AppleWorks users are like boaters and pilots. We're always looking for faster, more convenient vehicles. When we first got AppleWorks most of us were impressed by its speed and convenience. But as we find more uses for the program, our files grow and we raise our standards.

When I conduct NAUG's AppleWorks seminars, I am regularly asked "What's the best way to speed up AppleWorks?" Some of my answers to this question are surprising.

### Step One: More Memory

The first step in speeding up AppleWorks is to increase the amount of memory in your computer. As you probably know, disk access is a relatively slow computer operation. AppleWorks is so large, the program will not fit in a 128K computer. So the program is written in "modules". If you have 128K of memory, AppleWorks only loads its most essential modules into RAM and stores the rest on disk. When you invoke the commands not in memory (e.g., the Save Command), AppleWorks goes to the disk drive, loads in the appropriate module, and executes the command. Of course, this slows down the speed of the program.

So the first step to speeding up AppleWorks is to increase the memory in your computer. AppleWorks checks to see how much RAM is in your system. If it finds 512K or more of RAM, the program loads in all its modules and only accesses the disk drive when you issue an Apple-P command to print a document or report. (Note: The AW2 Expander software from Applied Engineering modifies AppleWorks so it loads the complete program, including the print routines, into memory. If you have an Applied Engineering memory product, AppleWorks never accesses the disk that contains the program.)

**Figure 1: AppleWorks Performance on Different Systems**

| System | Speed Index * |
|---|---|
| Apple IIGS with TransWarp GS card | 7.0 |
| Apple IIe with RocketChip | 3.6 |
| Apple IIc with RocketChip | 3.6 |
| Apple IIc Plus | 3.0 |
| Apple IIe with TransWarp card | 3.0 |
| Apple IIe with Zip Chip | 3.0 |
| Apple IIc with Zip Chip | 3.0 |
| Laser EX | 3.0 |
| Apple IIGS | 2.5 |
| Apple IIe | 1.0 |
| Apple IIc | 1.0 |
| Laser 128 | 1.0 |

* Speed Index is the relative speed of AppleWorks compared to its speed on an unenhanced Apple IIe or IIc. That is, an Apple IIGS with a TransWarp GS card installed runs AppleWorks approximately seven times faster than an unenhanced Apple IIe or IIc.

### Step Two: Upgrade the Processor

Once you add memory to your system, you'll still want the program to run faster. The next step is to upgrade the processor in your computer.

As is apparent from *Figure 1*, AppleWorks runs fastest on an Apple IIGS equipped with an Applied Engineering TransWarp GS card. However, if you own an Apple IIe or IIc, don't sell your system just to speed up AppleWorks; you can add a speed-up product to your computer and get speeds faster than those available on a standard IIGS. Apple IIe owners can use an accelerator card such as the

Applied Engineering TransWarp card or a speed-up chip like the Zip Chip or RocketChip. These products enhance your system so it runs AppleWorks slightly faster than the program operates on an Apple IIGS.

Apple IIc owners can add a Zip Chip or RocketChip to their system and get the same speed benefits available on the Apple IIe. *[Ed: Reviews of the Zip Chip and RocketChip appeared in the July 1988 and April 1989 issues of the* ***AppleWorks Forum****. These reviews include performance comparisons with the Applied Engineering TransWarp card. In addition, Zip Technology recently announced a faster version of the Zip Chip and an Apple IIGS speed-up product. NAUG has not tested these products with AppleWorks so we did not include them in the list in* Figure 1.*]*

**There's More**

But don't think you're done when you get a faster processor. You'll probably be happy for a while, but then you'll want more, faster, and better ... just like the boater and the pilot. The next steps are hard disks and disk caching cards ... but we'll let that wait until you stop marvelling at the speed of your accelerated system before we talk about those products.

## Associate Editor Moving On

Our best wishes to William Marriott, Associate Editor of the ***AppleWorks Forum*** and Graphic Designer for **NAUG** since November 1987. We congratulate Bill on his appointment as a Technical Support Specialist with Claris Corporation. Bill, we appreciate your significant contributions to **NAUG** and wish you the best in the sunny climes of Silicon Valley.


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|---|---|
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# How to Write Macros that Execute Repetitive Tasks

by Mark Munz

*In this, the tenth article of the Macro Primer series, Mr. Munz describes how to use UltraMacros' capability to "loop" so you can repeat a series of macro commands.*

AppleWorks users write macros to save time performing repetitive tasks. While the macros I presented so far in this series save time by reducing several keystrokes into one, none can perform iterative operations in a controlled manner. If you want a task done five times, you must press the Solid-Apple key combination five times.

In this article, I will describe how to write macros that "loop", macros that repeat themselves. You will also learn how to use the <begin>, <rpt> (repeat), and <onerr> (on error) commands to control loops.

### Why Use Loops?

There are many situations where the ability to "loop" can simplify or speed up an operation. For example, you can use looping macros to move a specified number of lines from the word processor into a spreadsheet, or to enter a sequential serial number into every record in a data base. Both these examples require that you execute a repetitive operation a specified number of times.

### <begin> and <rpt>

One way to write a macro that loops is to use the <goto> command. Consider the following macro that waits for your input and rings the AppleWorks error buzzer unless you press the Space Bar:

```
G:<all: msg ' Press Space to stop ':
   A=key:
   if A=32 then stop : elseoff :  { ASCII 32=Space Bar }
   bell : goto sa-g>!
```

This macro uses the <goto> command to "call itself". You can achieve the same effect with the <rpt> (for "repeat") command as follows:

```
G:<all: msg ' Press Space to stop ':
   A=key:
   if A=32 then stop : elseoff :
   bell : rpt>!
```

The <rpt> command tells UltraMacros to jump back to the beginning of the macro and re-execute the instructions in the macro. If you do not want to repeat the entire macro, you can use the <begin> command to specify a new starting point, as follows:

```
G:<all: msg 'Press the Return Key':
   A=key:
   begin:
   msg 'This message repeats. Press Space to stop':
   A=key:
   if A=32 then stop : elseoff :
   bell : rpt>!
```

This macro displays the message "Press the Return Key" and waits for any keystroke. Then the macro displays the message "This message repeats. Press Space Bar to stop." The message stays on the screen until you follow its instructions.

While it is easy to write macros that loop, the problem is getting the macro to stop looping. There are three common ways to tell UltraMacros to stop looping: Using a "flag", a "counter", or checking for "errors".

### Controlling Loops with "Flags"

The Solid-Apple-G macros above use an <if> statement to exit the loop; each macro continues to loop until you press the Space Bar. The <if> command can check for any specific entry or variable you specify.

When the introduction of a special value causes the end of a loop, that value is called a "flag". Just as race

cars exit the track when you wave a checkered flag, these macros exit their loop when variable A contains the ASCII value 32 (a press of the Space Bar).

### "Counters"

A second common way to control a loop is through the use of a "counter". You use a "counter" to perform a series of operations a specified number of times. For example, you can use a counter to insure that a macro inserts the current date in only five records or to copy a spreadsheet row into three separate spreadsheets.

In the race car metaphor, imagine cars that leave the track after a certain number of laps and the driver in this race must count each lap.

To write a macro that "counts each lap", you must set up a "counter". A counter is a numeric variable that you either increment or decrement each time the macro loops. Then you use an <if> statement to check for the current value of the counter.

For example, here is a macro that uses a counter to print a line of 50 asterisks across the screen:

```
H:<awp: A=0:
   begin
   >*<                          { print an asterisk }
   A=A+1:                   { increment the value of A }
   if A<50 then rpt: elseoff>!
```

Each time the macro loops, it prints an asterisk and adds "1" to the value in variable A. The <if> statement allows the macro to continue until the value of A reaches 50; then it terminates the macro. The <begin> command specifies the beginning of the loop; without <begin>, the macro would set A to zero with each pass, causing the loop to continue indefinitely.

You can use counters to control loops when you know the number of times you want to execute the loop. Alternatively, you can ask the user how many times to repeat the macro, as in the following example:

```
H:<awp: A=0:
   B=0:
   msg "How many asterisks do you want to print?":
   $1=getstr 3:
   B=val $1:
   begin
   >*<                          { print an asterisk }
   A=A+1:                   { increment the value of A }
   if A<B then rpt: elseoff>!
```

In this example, the macro instructs the user to enter a number. UltraMacros stores the number as a "string" in variable $1, then converts the string to a value it stores in numeric variable B. Later, the <if> statement tests if variable A (the counter) is less than variable B.

### Using "Errors" to Exit Loops

You can only use a counter to exit a loop if you know how many times you want to repeat a process. Unfortunately, the conditions in AppleWorks are so variable that you often do not know the exact number of times to repeat a loop.

For example, imagine you want to write a macro that loads the last file on a disk onto the desktop. You want this macro to work no matter how many files are on the disk. Yet there is no way to know how many documents are on each disk, so you cannot use a counter to tell AppleWorks when the highlight is at the bottom of the list of files.

When you load files onto the desktop, you get to the end of the list of files by pressing the Down-Arrow Key. If you press the Down-Arrow Key again, AppleWorks beeps. This is technically called an "error" because you pressed the Down-Arrow Key when you were already at the end of the list. AppleWorks sounds a warning to tell you there is no place for the Down-Arrow Key to move the cursor. *[Ed: See the sidebar entitled, "How to Use "Errors" Constructively"]*

I mentioned earlier in this series that UltraMacros disables the AppleWorks error bell. However, UltraMacros is still aware that the "error" occurred, even though the error bell does not sound. While UltraMacros usually ignores the warning beep, you can instruct a macro to take any specified action when a beep occurs.

### The <onerr> Command

UltraMacros offers an <onerr> ("On the occurrence of an error") command that "listens" for the silent error warning and terminates a looping operation. <onerr> offers three options:

*<onerr stop>* — Tells UltraMacros to stop the current macro when it detects an AppleWorks warning beep and returns control to AppleWorks.

## How to Use "Errors" Constructively

While we normally associate errors with mistakes that we should avoid, the errors intercepted by the <onerr> command are *useful* in your macros. These errors give you control over loops that are difficult to control with flags or counters.

When you write macros, you should equate "errors" with soundings of the AppleWorks bell, not with mistakes. You should anticipate when AppleWorks will sound the error bell, and the implications of ignoring it, stopping the macro, or branching when the bell sounds.

*<onerr goto>* — Tells UltraMacros to terminate the current macro and start another macro. For example, <onerr goto sa-X> says "When you detect the warning beep, terminate the current macro and start macro Solid-Apple-X."

*<onerr off>* — Tells UltraMacros to ignore AppleWorks warning bells.

You can put <onerr> commands anywhere in a macro, but you will typically place them at the beginning of the macro to turn error checking on or off. An <onerr> command remains in effect until the macro terminates or until the macro encounters another <onerr> command. For example, the command <onerr stop> at the beginning of a macro instructs UltraMacros to stop the macro when an error occurs at any point in its execution. The following macro uses <onerr stop> to simulate the standard Open-Apple-9 command in AppleWorks:

```
9:<all : onerr stop : down : rpt>!
```

This macro enters a Down-Arrow until AppleWorks beeps and then stops. You can use this macro at any time in AppleWorks; it adds the equivalent of an Apple-9 command to any menu or list of files.

Alternatively, you use the <onerr goto> command to check for "errors" and turn over control to another macro. For example, here is a macro that presses the Down-Arrow Key until AppleWorks beeps and then displays the message "You reached the end of the list":

```
9:<all : onerr goto sa-w : down : rpt>!
w:<all : msg ' You reached the end of the list '>!
```

### <onerr off>

As indicated earlier, UltraMacros normally ignores AppleWorks' error beep unless you use an <onerr> command. However, there are times you want part of a macro to respond to the beep and other parts of the macro to ignore the beep. You make your macro responsive to the warning beep with an <onerr stop> or <onerr goto> command. You can tell UltraMacros to return to its normal condition (i.e., ignore the warning beep) by issuing an <onerr off> command anywhere in the macro.

### Conclusion

This month, I discussed ways you can control program flow with the <begin> ,<rpt>, and <onerr> commands, together with flags and counters. These are tools you can use to write macros that perform repeating tasks properly, without having to segment those procedures over several different macros.

Next month, I will describe how to use subroutines to further simplify macro development.

*[Mark Munz is a programmer on the staff at Beagle Bros, publishers of UltraMacros and the TimeOut enhancements to AppleWorks.]*


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# TimeOut SideSpread: Print Spreadsheets and Data Base Reports Sideways

by Bruce Shanker

TimeOut SideSpread is an AppleWorks enhancement that prints spreadsheets and data base data sideways. SideSpread eliminates the need to cut and paste segments of a printout every time you print a wide worksheet (see *Figure 1*).

In addition, SideSpread offers two attractive fonts and a greater variety of font sizes than are available in AppleWorks.

SideSpread works with most popular dot matrix printers and interface cards. The program is compatible with versions 2.0 and 2.1 of AppleWorks and with most AppleWorks enhancements, including the AppleWorks desktop expanders from Applied Engineering and Checkmate Technology, Super MacroWorks, and the Pinpoint Desk Accessories.

### How to Use SideSpread

It is easy to get started with SideSpread. First, install TimeOut onto your working copy of AppleWorks. Next, copy the files TO.SIDESPREAD, TO.CLIPBOARD, and TO.UTILITIES from the SideSpread disk onto a TimeOut applications disk. Finally, boot your TimeOut-enhanced copy of AppleWorks, enter an Apple-Escape, and use the TimeOut Utilities to configure SideSpread for your system. *[Ed: Step-by-step directions on how to install TimeOut appear in the article entitled "How to Get Started with TimeOut" in the February 1988 issue of the AppleWorks Forum.]*

Configuration consists of selecting your printer and interface card from an extensive list of choices provided by SideSpread. *Figure 2* lists the printers and

**Figure 1: SideSpread Output**

File Sample 1
********** *** INCOME STATEMENT FOR 1987 (ESTIMATED) **********

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Income | | | | | | | | | | | | | |
| Resale Sales | 1,114,582 | 1,262,403 | 805,723 | 903,953 | 900,753 | 914,853 | 1,390,283 | 1,582,114 | 1,661,714 | 1,527,444 | 1,774,644 | 1,384,754 | 15,223,220 |
| Taxable Sales | 35,317 | 66,067 | 66,367 | 85,477 | 66,587 | 92,128 | 40,786 | 63,609 | 18,188 | 30,768 | 83,798 | 25,489 | 674,581 |
| License Fees | 21,824 | 18,924 | 15,134 | 86,734 | 21,174 | 53,854 | 73,394 | 12,094 | 47,235 | 13,815 | 36,865 | 11,955 | 413,002 |
| | 1,171,723 | 1,347,394 | 887,224 | 1,076,164 | 988,514 | 1,060,835 | 1,504,463 | 1,657,817 | 1,727,137 | 1,572,027 | 1,895,307 | 1,422,198 | 16,310,803 |
| Cost of Goods Sold | | | | | | | | | | | | | |
| Purchases | 538,551 | 407,451 | 185,351 | 219,641 | 627,861 | 571,181 | 663,581 | 240,991 | 727,312 | 176,812 | 985,232 | 316,532 | 5,660,496 |
| Merchant Card | 8,189 | 6,479 | 6,769 | 98,301 | 13,601 | 41,411 | 87,611 | 14,521 | 56,431 | 67,731 | 35,641 | 44,841 | 481,526 |
| Royalties | 87,112 | 53,422 | 29,632 | 86,452 | 28,552 | 87,752 | 16,472 | 11,292 | 70,692 | 21,903 | 33,413 | 82,423 | 609,117 |
| | 633,852 | 467,352 | 221,752 | 404,394 | 670,014 | 700,344 | 505,422 | 266,804 | 854,435 | 266,446 | 1,054,286 | 443,796 | 6,488,897 |
| Overhead | | | | | | | | | | | | | |
| Wages | 8,919 | 28,001 | 93,501 | 53,211 | 97,211 | 70,911 | 36,031 | 69,141 | 11,831 | 15,141 | 39,741 | 92,261 | 615,900 |
| Salaries | 96,192 | 89,313 | 22,513 | 23,933 | 21,033 | 44,133 | 17,233 | 74,733 | 42,073 | 12,063 | 64,193 | 10,393 | 517,805 |
| Interest | 9,521 | 2,424 | 8,921 | 1,141 | 5,741 | 7,251 | 2,851 | 2,561 | 4,261 | 2,871 | 2,571 | 6,881 | 56,995 |
| | 114,632 | 119,738 | 124,935 | 78,285 | 123,985 | 122,295 | 56,115 | 146,435 | 58,165 | 30,075 | 106,505 | 109,535 | 1,190,700 |
| Operating Expenses | | | | | | | | | | | | | |
| Advertising | 24,261 | 40,361 | 10,261 | 69,061 | 39,951 | 65,061 | 78,751 | 67,161 | 70,461 | 23,161 | 89,671 | 43,181 | 621,342 |
| Promotion | 88,424 | 69,034 | 47,324 | 69,244 | 88,354 | 70,564 | 53,184 | 41,315 | 71,515 | 68,955 | 40,195 | 37,116 | 745,224 |
| Postage | 2,106 | 2,226 | 9,656 | 3,666 | 5,696 | 7,947 | 2,997 | 3,068 | 1,629 | 2,999 | 1,279 | 46,401 | 89,610 |
| Office Expenses | 4,407 | 4,717 | 7,037 | 3,376 | 3,296 | 2,376 | 7,667 | 6,736 | 5,816 | 9,326 | 5,146 | 3,226 | 63,626 |
| Insurance | 4,203 | 3,603 | 4,323 | 1,843 | 7,473 | 2,673 | 5,593 | 1,304 | 1,293 | 9,314 | 1,424 | 8,524 | 51,560 |
| | 123,401 | 119,941 | 78,601 | 147,190 | 144,770 | 149,121 | 148,182 | 119,584 | 150,714 | 113,695 | 137,715 | 138,448 | 1,571,362 |
| Gross Income | 1,171,723 | 1,347,394 | 887,224 | 1,076,164 | 988,514 | 1,060,835 | 1,504,463 | 1,657,817 | 1,727,137 | 1,572,027 | 1,895,307 | 1,422,198 | 16,310,803 |
| Total Expenses | 871,385 | 707,031 | 425,289 | 529,369 | 938,759 | 971,750 | 709,719 | 532,823 | 1,053,314 | 410,216 | 1,298,506 | 691,779 | 9,250,959 |

interface cards supported by the program. Unfortunately, this information does not appear on the outside of the package or in the documentation. SideSpread does not let you add printers to the program; if your printer and interface card are not included on these lists, you will probably not be able to use SideSpread.

You use the TimeOut Utilities program to specify the font you want in your printouts. You can choose between Courier or Monaco fonts and select from a number of different size characters available in each font style. Both Courier and Monaco are mono-spaced fonts. Like most sideways programs, SideSpread does not support printing in proportional fonts.

One inconvenience of SideSpread is that you must quit SideSpread and return to the Utilities program to change the font style or size. In addition, the entire spreadsheet must be printed in the same font; you cannot mix fonts to get enhanced output within a single spreadsheet.

Once configured for your system, SideSpread is easy to use; follow these steps:

1. Get an AppleWorks spreadsheet on the screen.
2. Issue an Apple-O command to go to the Options Menu and specify the margins for the printout. (SideSpread uses the margin settings entered into AppleWorks but ignores the characters per inch and page size settings.)
3. Press Apple-Escape to invoke the TimeOut Menu.
4. Select SideSpread from the list of TimeOut applications.
5. Indicate whether you want to print "All", "Columns", "Rows", or a "Block".
6. Indicate whether you want "Draft", "Standard", or "High" print quality. The better the quality output you specify, the longer it takes to print a spreadsheet. Fortunately, SideSpread prints faster than SuperFonts at all settings. However, SideSpread's "high quality" mode does not print as nicely as SuperFonts'.
7. Indicate if you want "Tall Adjusted" output. This option adjusts the aspect ratio between horizontal and vertical dots in the printout; I find the Tall Adjusted option provides more attractive output.
8. Indicate if you want to reduce the output by 50%. For example, if you used the Utilities program to specify a 12-point font, "Reduce 50%" prints the spreadsheet in six point type. This approach produces the highest-quality output from the program.

## How to Get the Most Attractive Output from SideSpread

Some printers can use SideSpread's "Reduce 50%" option to create more attractive documents. Not only can you shrink the size of the characters in a printout, you can also print font sizes that are not otherwise available in SideSpread. For example, if you specify Monaco 14-point output and print at "Reduce 50%", you get seven point type. The chart in *Figure 2* indicates which printers support 50 percent reduction.

Second, the "Reduce 50%" option generates higher quality output than standard print mode. For example, Monaco 24-point type printed at 50 percent has a higher print density than Monaco 12-point type printed at standard density. This higher print density provides more fully formed characters and more attractive output than is available from the standard 12-point font.

**How to Produce Best Results**

Even draft-mode output from SideSpread is more attractive than the fonts built into your dot matrix printer. You can further enhance the quality of your output by following these suggestions:

1. Set the default options for a font that is twice the size you want in your final output. For example, to get the best output in Courier 12-point type, use the TimeOut Utilities to set the default font as Courier 24.
2. Select "Reduce 50%" and "Tall Adjusted" from the Options Menu when you print.

This combination of options provides the most attractive printouts of AppleWorks spreadsheets.

### Using Data Converter with Applied Engineering Cards

Unfortunately, Data Converter is limited to transferring up to 250 records at a time between the AppleWorks data base and spreadsheet modules. This is true even if you expanded the AppleWorks clipboard with the AW 2 Expander program that comes with Applied Engineering memory expansion cards. Here is why: While the AW 2 Expander increases the size of the data base and word processor clipboards, it has no effect on the size of the spreadsheet clipboard. Thus, the spreadsheet clipboard and Data Converter remain limited to 250 lines.

Although you gain no functionality by using an "expanded" version of AppleWorks with Data Converter, you still must tell the program that you are using an Applied Engineering-modified clipboard. With the TimeOut Utilities Menu on the screen, indicate you want to change the configuration of Data Converter and you will find it easy to make the necessary changes.

### Using SideSpread to Enhance Data Base Output

While SideSpread works only with AppleWorks spreadsheets, you can use the program to enhance the output of data base reports. The procedure is to temporarily move a data base file into a spreadsheet, and print the spreadsheet with SideSpread. The program TO.CLIPBOARD (which appears on the TimeOut Menu as "Data Converter") makes it easy to transfer data between the AppleWorks data base and spreadsheet modules.

Follow these steps to print a data base file sideways:

1. Use the Apple-R command in the data base module to select the records you want to print.
2. With multiple record layout on the screen, copy up to 250 records onto the clipboard.
3. Issue an Apple-Escape command to get to the TimeOut Menu and select Data Converter from the menu.
4. Start a new spreadsheet file from scratch.
5. Issue a Copy Command and transfer the data from the clipboard into the new spreadsheet.
6. Delete the columns that include data you do not want to print.
7. Use the Apple-L command to change the width and format of the remaining columns.
8. Print the spreadsheet using SideSpread.

The only limit to Data Converter is the size of the clipboard. Because the AppleWorks clipboard is limited to 250 lines, you can only transfer 250 records at a time between the AppleWorks spreadsheet and data base modules. To transfer more records, repeat the Data Converter process until you transfer the complete data base file.

### Documentation and Support

While the SideSpread manual is well written, the program is so easy to use that you will probably not need the documentation.

Similarly, you will probably never need help using SideSpread, but if you do, you can get excellent free telephone support from the folks at Beagle Bros or through **NAUG**'s Members Helping Members program. I found the technical support staff at Beagle Bros to be knowledgeable and helpful. Be patient when you encounter a busy signal calling Beagle; the technical support staff will not rush you once you get them on the line.

### Comparison to Other Programs

SideSpread is not the first program that lets you print wide AppleWorks spreadsheets. Earlier programs include Slalom, a public domain program available from the Big Red Apple Club and other users groups, Sideways from Funk Software, and Fontworks from the Software Touch (now a part of Beagle Bros). SideSpread represents a significant improvement over these other programs, primarily because SideSpread lets you print a spreadsheet or data base records without quitting AppleWorks. Using SideSpread, you can print, modify the spreadsheet, and print again without ever rebooting AppleWorks. With Slalom, Sideways, and Fontworks, you must save your spreadsheet on disk, quit AppleWorks, boot up the printing utility, and print the spreadsheet. If you want to make any

## Figure 2: Supported Printers and Interface Cards

### PRINTERS

Apple DMP
Apple ImageWriter I & II
Apple Scribe
C. Itoh Prowriter I *
Epson AP-80
Epson FX-80 *
Epson LQ-800/1000/1500 *
Epson LX-80 *
Epson MX-70 *†
Epson MX-80/100 *
Epson RX-80 *
IBM Compatibles
IDS Micro Prism 480/80/132 *†
IDS Paper Tiger *†
Legend 1385
Mannesmann Tally 160/180
Mannesmann Tally Spirit-80 *
NEC PC-8023/8025 *
Okidata 82/83 *†
Okidata 84/92/93 †
Panasonic KX-P1091/1092 *
Star Delta 10/15 *
Star Gemini 10/15 *
Star Radix 10/15 *
Star SD 10/15 *
Star SG 10/15 *
Star SR 10/15 *
Transtar 315 *†

** Does not have the capability to print "Tall Adjusted".*
*†Does not have Standard, High Quality, or Reduce 50% capability.*

### INTERFACE CARDS

Apple IIc Serial Port
Apple IIc Serial to Parallel
Apple IIgs Serial Port
Apple Centronics Parallel
Apple Communications Card
Apple Parallel
Apple Serial Card
Apple Super Serial
Apricorn Serial
CCS 7710a Serial
CCS 7720 Parallel
CCS 7728 Parallel
Dispatcher
Dual-Comm Plus
Dumpling 64
Dumpling GX
Epson APL
FingerPrint
FingerPrint Plus Parallel
Firmware
Grafstar
Graphicard
Grappler
Grappler+
Grappler Serial
Microbuffer II
Microtek RV-611C
Microtek SV-622C
Mountain Computer Parallel
Mountain Computer Serial
MPC AP-80
MPC AP-Graph
MPC AP-SIO
Omnigraph
Pkaso/Pkaso U
Pretty Print
Printer Pro
Printerface
Printermate
Printmax
Quadram APIC
Spies Niceprint
Spies Super-MX
SSM-AIO Parallel
SSM-AIO Serial
SSM-APIO
SSM-APPIC
SSM-ASIO
Texprint Print-It
Tymac
Versacard Parallel
Versacard Serial
Videx PSIO Parallel
Videx PSIO Serial
Videx Uniprint
Wizard IPI

changes to the content of the spreadsheet, you must return to AppleWorks, make the changes, save the file, quit AppleWorks, and repeat the process until you get the desired output. In addition, Slalom, SideWays, and Fontworks do not offer the equivalent of Data Converter, which lets you prepare data base reports for sideways printing.

### The Program Isn't Perfect

While SideSpread is clearly the best way to handle wide spreadsheets, I have four minor complaints about the program:

1. It is inconvenient to change font sizes in SideSpread. You must quit SideSpread, invoke the TimeOut Utilities, change the font size or style, then return to SideSpread to use that font. While this isn't difficult, it is inconvenient.
2. The fonts used by SideSpread are not compatible with TimeOut SuperFonts, an AppleWorks enhancement that provides attractive output from AppleWorks documents. Since the SideSpread fonts are built into SideSpread, there is no way to use the SuperFonts fonts or other fonts in the NAUG Public Domain Library with SideSpread.
3. While many users run SideSpread from a floppy disk, the program becomes more convenient if you have extra memory in your computer, or a hard disk system. The computer loads SideSpread (and most other TimeOut applications) into memory each time you invoke the program. Every time you want to change fonts, you must quit SideSpread, load TO.UTILITIES from the disk, change the SideSpread font configuration, and reload SideSpread into memory to print the spreadsheet. Make certain you keep the files TO.SIDESPREAD, TO.UTILITIES, and TO.CLIPBOARD on the same disk or you will have to swap disks repeatedly when you change fonts or transfer files.
4. If you try to print a spreadsheet that is more than eight inches long, SideSpread prints only the portion of the spreadsheet that fits in the first eight inches. You must print the remaining portion of the spreadsheet by specifying "rows" and choose the next series of rows to print. This process must be repeated until you print the entire spreadsheet. Perhaps future versions of the program will let you select "All" from the "Print from?" Menu and will do the segmenting necessary to print a large spreadsheet.

### Conclusions

I recommend SideSpread to all serious AppleWorks spreadsheet users. The program makes it easy to get attractive output from the AppleWorks spreadsheet module and overcomes some of the printer limitations inherent in AppleWorks.

*[SideSpread costs $49.95 from Beagle Bros, 6215 Ferris Square, Suite 100, San Diego, CA 92121.]*

*[Bruce Shanker is a mathematics teacher at Kensington High School in Philadelphia, Pennsylvania. Bruce is one of NAUG's "Beagle Buddies".]*

# AppleWorks Announcements at AppleFest

Many AppleWorks hardware and software developers use the biannual AppleFest show as a platform to announce new products and services. This May's Boston AppleFest was no exception; here are product announcements of interest to AppleWorks users.

### Apple Computer

Apple Computer demonstrated a new version of GS/OS, their 16-bit operating system for the Apple IIGS. Officially called "Apple IIGS System Software 5.0", the new system supports communication over the AppleTalk network and significantly reduces the loading times for 16-bit programs such as AppleWorks GS. Tom Hoke, AppleWorks GS Development Manager for Claris Corporation, says it takes one-tenth the time to load all the AppleWorks GS modules into memory under version 5.0 than under the current version of GS/OS. Steve Carlton, AppleWorks GS Product Manager, added that GS/OS 5.0 speeds up the AppleWorks GS screen display four to six times.

According to Apple, GS/OS v. 5.0 will be available this summer.

### Claris Corporation

Claris Corporation distributed copies of AppleWorks GS 1.0v2 to reviewers at AppleFest. Registered AppleWorks GS owners should receive their copies of this free update shortly.

Claris also announced a site licensing program for AppleWorks and AppleWorks GS. Site licensing allows schools to make an unlimited number of copies of either program for use at one or more sites. The program is flexible and provides attractive discounts for schools that want to license both AppleWorks and AppleWorks GS. In addition, the program lets institutions upgrade from 10-packs into a site licensing arrangement. For additional information, contact Claris' Site Licensing Department at (800) 747-SITE.

Claris also announced the availability of 10-packs of both AppleWorks and AppleWorks GS. Each 10-pack includes ten copies of the program and one set of documentation. Retail prices are $1699 for AppleWorks GS and $1414 for AppleWorks. Educator's prices are $1149 and $959 respectively.

### Beagle Bros

Beagle Bros demonstrated all four of its new products: TimeOut ReportWriter, TimeOut TeleComm, GS Font Editor, and Program Writer. (A description of these products appears in the May 1989 issue of the ***AppleWorks Forum***.) The company announced that ReportWriter, GS Font Editor, and Program Writer will ship on time, but that development problems will delay the release of TeleComm until late June.

**NAUG** plans to ship copies of both ReportWriter and the GS Font Editor by June 15 and is accepting orders for those products. Do not order TeleComm at this time; we will notify members through the ***AppleWorks Forum*** when this product becomes available.

### Applied Engineering

Applied Engineering introduced its Vulcan series of internal and external hard disk drives for the Apple IIe and IIGS. Drives will be available in 20, 40, 60, 100, 150, and 200 megabyte capacities. The 20 megabyte internal drive lists for $649, the 40 megabyte drive costs $849. Specifications and prices for the larger drives were not available at press time.

The internal drives include a heavy-duty power supply for the computer, a cooling fan, and line conditioning. Clever design of the proprietary, non-SCSI-compatible interface card lets you install the card in any slot (except slot 3) and set DIP switch-

es that fool the computer into thinking the card is in any other slot you specify.

Applied Engineering expects to have the drives available in quantity by this summer.

### Zip Technology

Zip Technology demonstrated their new 8-megahertz Apple IIe/IIc/II+ accelerator chip running TimeOut-enhanced copies of AppleWorks. AppleWorks ran noticeably faster on the 8-megahertz chip than on the earlier 4-megahertz Zip Chip; AppleWorks running on a standard Apple IIe looked glacial by comparison.

The company reports that the 8-megahertz chip will be available in quantity by late June and that the 4-megahertz version of the chip will remain in production while there is demand for the product. The 8-megahertz chip has a retail price of $199; the company dropped the price of the 4-megahertz chip to $149. Zip offers owners of 4-megahertz chips a $75 rebate toward the purchase of the 8-megahertz unit.

### Ohio Kache Systems

Ohio Kache demonstrated its new SCSI Kache, a piggyback adapter which lets SCSI drives transfer data into the Apple II at speeds significantly faster than those available from a standard SCSI interface. The combination of the Ohio Kache SCSI product connected to a Chinook Technology drive dramatically reduced the time necessary to boot up TimeOut-enhanced copies of AppleWorks and AppleWorks GS. For example, it took less than five seconds to boot up a copy of AppleWorks enhanced with 30 TimeOut modules into an Apple IIe equipped with a 4-megahertz Zip Chip.

NAUG plans to test the impact of Ohio Kache's products on the operating speed of AppleWorks; we will report those results in a future issue of the *AppleWorks Forum*.

### First Class Peripherals

First Class Peripherals demonstrated three new Apple II-compatible hard disk systems. The D4–Turbo, the only new drive that is not fully SCSI-compatible, is a 40-megabyte system that will run up to four different operating systems. The company claims that the drive has an average access time of 25 milliseconds, a mean time between failure of 30,000 hours, and automatic head parking. The D4-T carries a suggested list price of $995.

The DF4 and DF8 are fully SCSI-compatible drives that fit between the monitor and the CPU on an Apple IIGS. Unlike most Siders, these drives use the newer 3.5-inch disk and voice coil technology to provide faster and more reliable operation. First Class Peripherals claims that these technologies along with 64K of high speed RAM cache on the controller card provide average access times of only 12 milliseconds and that the drives will load all the AppleWorks GS modules in only 62 seconds as opposed to the approximately 6 minutes it takes to load from a 3.5-inch floppy disk.

The 40-megabyte DF-4 lists for $1,095; the 80-megabyte DF-8 for $1,395.

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ITALIAN SPANISH

Type accented foreign text quickly and simply with the classic AppleWorks® word processor. Then, from **inside** AppleWorks, **EuroWorks** prints your foreign text on an ImageWriter® I or II or compatible printer.

Foreign files may include every character on your American keyboard plus 13 French, 7 German, 10 Italian, or 10 Spanish: just two sensible keystrokes per foreign character. Eight new symbols for English too: just three strokes each!

**EuroWorks** requires classic AppleWorks v2.0 or v2.1 USA and an Apple DMP, ImageWriter I or II, or Scribe; an MT85/86; or a Seikosha SP-1000AP printer. **EuroWorks** is compatible with, but does not require, the TimeOut™ series from Beagle Bros, Inc.

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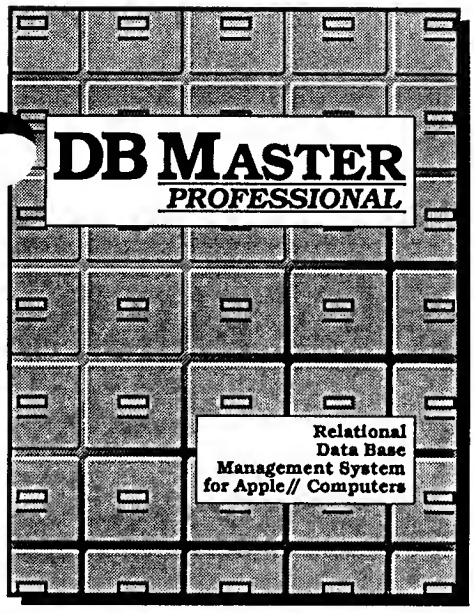


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## DB Master *Professional*

### TECHNICAL SPECIFICATIONS

**Capacities:**
- 2000 bytes/record
- 200 fields/record
- 30 screen pages/record
- 250 characters/field
- Hard disk files—up to 10 Megabytes
- Floppy disk files—up to 50 disks

**Field Types:**
- Alphanumeric, 1 to 250 characters
- Numeric—3 types
- Dollar/cents, to $99,999,999,999,999.99
- Yes/No
- Date
- Add Date—date when record was added
- Edit Date—last date when record edited
- Add Time
- Edit Time
- User Defined—for phone & social security numbers, part #'s, etc
- Label Only—useful for customizing screens

**Computed Fields:**
Date, numeric and dollar fields can be computed. Functions available

+ - * / ^

< <= > >= <> =

AND OR NOT

INT ABS SGN

MIN MAX Current Date

Examples

F10 = F7 + F8 + ( .05 * F9)

F20 = MAX(F10,F11,F12,100)

F28 = .05 * (F30 * "PA") + .05 * (F30 + "CT")

**Report Generator:**
- print labels, columnar, forms-style and mail merge reports
- report width: 20–255 characters
- up to 255 lines/record
- up to 255 fields per report
- type free-form text anywhere on report layout
- labels up to 9 across
- set justification, print-styles, case conversion, number formatting, statistics, date formats, etc. field-by-field
- header and footer lines separate lines of text (including normal and computed fields) at beginning/and of report, page, group of records, and/or column
- column subtotals and totals, page #'s, record #'s, & date or time report is printed can be printed anywhere on the page or in header and/or footer lines
- statistics: count total, average, min., max. & standard deviation
- complex computed field formulas, including calculations based on column totals and subtotals
- sort on up to 9 fields at a time; case sensitive/insensitive, ascending/descending
- print to printer, disk (ASCII text file), or screen
- Conditional Printing —"IF THEN-ELSE" logic in report layouts

**Hardware Requirements:**
- Apple //e (Enhanced, with extended 80 column card), //gs, //c, //c Plus or Laser 128
- NOT COPY PROTECTED. Can be installed on hard disk

### ADDITIONAL FEATURES

**Relational Capabilities:**
- Import & Export Rules—"relate" up to 10 files for automatic look-ups, posting, etc
- Import data into records and/or into reports
- Exports can replace, add to or subtract from data in destination field

**Data Entry Features:**
- Global Editor
- Secondary Keys for rapid searches on specific fields
- Required & Validated Fields
- Increment, Decrement and Calculator functions
- Tab Stop Fields & Short forms speed data entry & editing

**Other Features:**
- Password Protection for file security
- "Receipts" function for "point-of-sale" applications
- Date and Time Math
- and much more!

## WE DEAL IN POWER!

**Power to the Apple // User!** DB Master *Professional* re-defines the Apple // as a lean, mean data base machine, capable of feats you've only dreamed you and your computer could accomplish: Inventory control. Accounting. Business management. School administration. Medical office management. Any automated record keeping task that would be useful in your business, organization or profession.

## FEATURES, FEATURES, FEATURES!

Name a data base feature you've wanted - we've probably got it! Relational importing and exporting between files. Passwords. Data exchange with AppleWorks and other programs. Built-in mail merge. Validated and required fields. Multiple-across label printing. Date and time calculations. And some features you may not have thought of: Printing numbers in "word" form. Automatic quarterly reports. Point-of-sale invoicing. User-defined field types. Free-form text in reports. And lots, lots more.

## LIMITS THAT DON'T LIMIT YOU

More fields, more field types, longer fields, larger files, more report formats, more report styles, more ways of searching, more computed fields (in your records and in your reports), more ways of entering, validating, viewing, formatting and printing your data, more supported printers, and more ways to make data entry faster, more convenient and more accurate! Whatever you're looking for in a data base manager, DB Master *Professional* has it!

## ACCESSIBLE POWER, ACCESSIBLE PEOPLE

Of course, all of that power is useless if you can't figure out how to use it. Or if it gets in your way when you don't need it. That's why we go out of our way to make every function easy and convenient to use, list every command on your screen, and design our manuals for quick, easy reference.

And, since we're a small company, if you have a problem or question or want to suggest a new feature, you'll talk to the same people who design, [illegible]e and test the DB Master programs.

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After nearly a decade of producing Apple // data base managers, we know what works and what doesn't. We know that you care more about power and speed than color and graphics. That fast is never fast enough, and slow isn't worth the trouble. And something other programmers haven't realized — the report generator is the most important part of a data base manager! That's why DB Master *Professional* has one of the best report generators available for any computer!

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# How to Get Help with Beagle Bros and Pinpoint Enhancements

by William Marriott

Each month, the *AppleWorks Forum* lists the member-volunteers who offer technical support for AppleWorks products. This month's list identifies the volunteers who can answer questions about Beagle Bros and Pinpoint enhancements for AppleWorks. Next month's issue will contain a list of members who offer help with other AppleWorks-compatible software.

## Beagle Bros/Pinpoint

### How to Use This List

Use this month's list to find help with Beagle Bros and Pinpoint enhancements. To the left of each volunteer's name is one or more numbers indicating the enhancements that consultant supports. Volunteers are listed alphabetically by state.

1 = (Super)MacroWorks
2 = UltraMacros
3 = QuickSpell
4 = DeskTools
5 = FileMaster
6 = SideSpread
7 = SuperFonts
8 = Graph
9 = Spreadtools
10 = Pinpoint Desk Accessories
11 = Point to Point
12 = Graphic Edge
13 = Document Checker
14 = KeyPlayer

| | | City | Home | Work |
|---|---|---|---|---|
| **Alaska** | | | | |
| 10,11 | Ross Lambert | Unalakleet | - | 907/ 624-3161 |
| **Arizona** | | | | |
| 1,3,7 | Jeff Cox | Tucson | 602/ 297-0308 | - |
| all Beagle,10,13 | Clay Evitts | Tucson | 602/ 885-9789 | 602/ 296-5491 |
| **California** | | | | |
| 10 | Michael Beebe | San Diego | 619/ 224-8823 | 619/ 221-2363 |
| 10 | Stephen Brewer | San Bernadino | 714/ 883-0365 | 714/ 882-3308 |
| 1,2,3,4,5,7,8 | Robert Demmon | Coronado | 819/ 435-0554 | 619/ 435-0520 |
| 2,7 | Don Farrar | Pleasant Hill | 415/ 932-5509 | - |
| 1 | George Gray | Los Angeles | 213/ 774-4131 | - |
| 2,10-13,14 | Terry Higgins | Hayward | 415/ 887-7499 | - |
| 1 | Jane Hsuan | Nevada City | 916/ 272-8497 | - |
| 1,10 | Berenice Maltby | Corona del Mar | 714/ 640-7369 | - |
| 1,2,3,5,7 | Will Nelken | San Rafael | 415/ 459-0845 | 415/ 456-1798 |
| 2,3,4,5,6,7 | Jim Pennington | Long Beach | 213/ 420-8629 | - |
| **Colorado** | | | | |
| 3,4,5,8,10,11 | David Gillaspie | Lakewood | 303/ 988-0994 | 303/ 431-6100 |
| 3,11 | Harry McMullen | Littleton | 303/ 795-5510 | - |
| 1,2 | Larry Thaete | Boulder | 303/ 939-9072 | 303/ 492-2717 |
| **Connecticut** | | | | |
| 10,13 | Martin Knight | Middletown | 203/ 346-9698 | - |
| 1-8,10 | Emery Roth | Washington | 203/ 868-7118 | - |
| 10,11,12,13,14 | Newton Shaffer | Gales Ferry | 203/ 464-9716 | - |
| **Florida** | | | | |
| 1 | John Andrianoff | Ft. Pierce | - | 305/ 466-6653 |
| 2,3,4,5,6,7,8 | H. Clay Bailey III | Jacksonville | 904/ 744-2499 | 904/ 725-3477 |
| 1 | Larry Brooks | Tampa | 813/ 874-7355 | - |
| 2 | Thomas Stanius | Opa Locka | 305/ 624-6162 | 305/ 375-2095 |
| 1,2,3,4,5,6,7,8 | Jeff C. Strichard | Ft. Lauderdale | 305/ 587-9590 | 305/ 763-3883 |
| **Georgia** | | | | |
| 1,2,3,4,5,6,7,11 | Jim Sulsona | Doraville | 404/ 455-0853 | - |
| **Illinois** | | | | |
| 10 | J. Terry Flynn | Lake Bluff | 312/ 234-2820 | 312/ 680-0980 |
| 2,3,4,5,6,7,8 | Bowen Schumacher | Winnetka | 312/ 501-3314 | 312/ 546-0633 |
| 2,3,4,5,7 | Jeffrey Waggoner | Hinsdale | - | 312/ 887-1340 |
| 1 | Victor Weisskopf | Lincolnwood | - | 312/ 674-7400 |
| **Indiana** | | | | |
| 10,11 | Stanley Boler | Knightstown | 317/ 345-5663 | - |
| **Kansas** | | | | |
| 10 | Fred Schwan | Leavenworth | 913/ 651-2878 | - |
| **Maryland** | | | | |
| 3,6,7 | Morgan Jopling | Crofton | 301/ 721-7874 | - |
| 1,10-14 | Ronald Romanowicz | Glencoe | 301/ 472-2983 | 301/ 472-4800 |
| 1,2,3,4,5,6,7,8 | Michael Spurrier | Baltimore | 301/ 298-0263 | 301/ 955-5938 |
| **Massachusetts** | | | | |
| 1 | Jeff Weisenfreund | Newton | 617/ 965-028 | - |
| **Michigan** | | | | |
| 10,11,14,15 | Jim Anker | Hazel Park | 313/ 391-0030 | 313/ 542-3910 |
| 10 | Quality Computers | Grosse Pointe | 313/ 331-0700 | 313/ 331-1115 |
| 1 | Arthur Daniel | Warren | 313/ 445-7105 | 313/ 445-7142 |
| 3,5,7 | Jane Harris | Grand Rapids | 616/ 458-2653 | - |
| 1,3 | Bill Neef | Grass Lake | 517/ 522-4689 | - |

| | | City | Home | Work |
|---|---|---|---|---|
| 10 | J. O'Connor | Rochester | 313/ 853-1260 | - |
| 10,14 | Mike Robinson | Royal Oak | 313/ 585-5027 | - |
| 1,7 | Pete Ross | Wayne | 313/ 728-8720 | - |
| 1,11 | Richard Zajac | Mt. Clemens | 313/ 465-2615 | 313/ 465-5040 |
| 1,2,3,4,5,6,7,8 | Keith Zook | Grosse Ile | - | 313/ 675-1550 |
| **Minnesota** | | | | |
| 1 | Dick Kenfield | Hopkins | 612/ 938-4382 | - |
| **Missouri** | | | | |
| 2-8,10,13,14 | Whit Crowley | Manchester | 314/ 394-7955 | - |
| **Montana** | | | | |
| 10,14 | Steve Bernbaum | Sheperd | 406/373-6393 | - |
| 10 | Bob Shipek | Great Falls | 406/ 452-9104 | 406/ 791-2130 |
| **Nebraska** | | | | |
| 1,2,3,4,5,8 | Larry B. McEwen | Hastings | 402/ 463-2267 | 402/ 463-1387 |
| **New Jersey** | | | | |
| 1 | Pete Crosta | Nutley | 201/ 667-6369 | 201/ 677-4050 |
| 3,11 | Edwin C. Doe | Pt. Pleasant | 201/ 528-6349 | - |
| 2,3,6,7 | Link Keur | Augusta | 201/875-2568 | 201/992/7000 |
| 10 | Linda Nixon | Chatham | 201/ 635-0973 | - |
| **New York** | | | | |
| 10,11 | Don Menges | Rochester | 716/ 544-9398 | - |
| 2 | Harold S. Miller | Ozone Park | 718/ 641-5208 | - |
| 1 | James Nicoll | Pittsford | 716/ 381-9480 | 716/ 546-6732 |
| 1,2,3,4,5,6,7,8 | Quentin Packard | Troy | 518/ 273-8867 | - |
| 3,6,8 | David Strachen | Buffalo | 716/ 832-8869 | 716/ 634-8238 |
| 3,4,5,6,7,8 | Jerry Taylor | Hilton | 716/ 964-3319 | 716/ 964-3587 |
| 10,13 | Walter Taylor | W. Henrietta | 716/ 359-2857 | 716/ 263-7700 |
| **North Carolina** | | | | |
| 10,12,13,14 | Terry W. Robertson | Charlotte | 704/ 536-4261 | 704/ 377-0111 |
| **Ohio** | | | | |
| 1,10 | Mark Ball | Paris | 216/ 862-3277 | 216/ 627-7606 |
| 1 | William Beasley | N. Olmsted | 216/ 933-4408 | 216/ 777-7700 |
| 10 | Mark Elliot | Hudson | 216/ 653-5006 | 216/ 686-2280 |
| 2-7,10,13 | Carman Greco | St. Clairsville | 614/ 695-5026 | - |
| 11 | Guy R. Moore | Oxford | 513/ 523-3797 | 513/ 529-7584 |
| **Oregon** | | | | |
| 1 | Calvin Behrens | West Linn | 503/ 636-0762 | 503/ 655-0058 |
| 1,2,3,4,5,6,7,8 | Jim Emig | Portland | 503/ 771-1916 | 503/ 280-5666 |
| 1 | Martin Friedman | Philadelphia | 215/ 473-6137 | - |
| **South Carolina** | | | | |
| 1,11 | Oliver Roosevelt | Fairforest | 803/ 574-1104 | 803/ 576-1270 |
| **Tennessee** | | | | |
| 1 | Major Michael Sutter | Clarksville | 502/ 552-0973 | 615/ 798-8203 |
| **Texas** | | | | |
| 10 | Ralph Logan, Jr. | Fort Worth | - | 817/ 281-0661 |
| 10 | Bob Oberholtzer | Houston | 713/ 664-1795 | 713/ 664-2011 |
| **Vermont** | | | | |
| 13 | Lars Baris | Essex Jct. | - | 802/ 878-1392 |
| **Virginia** | | | | |
| 10 | Warren Downes | Yorktown | 804/ 898-1881 | 804/ 898-8386 |
| **Washington** | | | | |
| 1,10 | Thomas Chambers | Fox Island | 206/ 549-4114 | - |
| **Wisconsin** | | | | |
| 1 | Donald Chase | Omro | 414/ 685-5681 | - |
| 1 | Jerry K. Miller | Milwaukee | 414/ 425-0778 | 414/ 321-3820 |
| 10 | Mike Starck | Milwaukee | - | 414/ 545-5233 |
| 10 | Paul Van Wyk | Appleton | 414/ 739-6503 | 414/ 731-0941 |
| **Australia** | | | | |
| 1,2,3,4,5,6,7,8 | Ralph Morgan | Flynn | 61 62 587192 | - |
| **Germany** | | | | |
| 2,3,4,5,7 | Kevin Jay Gold | Berlin | 030/ 802-6395 | - |
| **Mexico** | | | | |
| 1,10 | Harve Thorn | Mexico City | - | 905/ 516-0720 |
| **Puerto Rico** | | | | |
| 2,4,5,6,8,9 | Robert Odell | Fajardo | - | 809/ 863-5938 |

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Letters to NAUG • 3 • What is "Bird's Better Bye"? • Lantz, Ware • Bird's Better Bye; ProDOS; modifications; Beagle Bros

Letters to NAUG • 3 • Working with AW2 Expander • Greenberg, Jim • Applied Engineering; AppleWorks; patches; modifications

Letters to NAUG • 4 • Right Justification in the Word Processor • Marinelli, Sharon • word processor; justification; formatting

Letters to NAUG • 4 • AppleWorks 2.0 Data Base Bug • Warchol, Leonard • AppleWorks 2.0; Bugs; data base

Letters to NAUG • 4 • Solving the Apple-0 Mystery • Bennett, Timothy • AppleWorks; UltraMacros; bugs

Spreadsheet Tip • 5 • Branching Spreadsheets: How to Use @CHOOSE • Williams, Warren; Merritt, Cathleen • spreadsheet; @CHOOSE

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AppleWorks News • 27 • AppleWorks Enhancements at AppleFest • n/a • Applied Engineering; Claris; Apple Computer; Zip

Members Helping Members • 30 • How to Get Help with Beagle Bros and Pinpoint Enhancements • Marriott, William • special programs; Beagle Bros; Pinpoint

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1. Letters: A letter, written to the Editor, that asks or answers a question, shares an idea, or makes a statement.
2. Notes: A note is a brief article or Quick Tip about a single theme.
3. Articles: Articles are generally two to five double-spaced pages long. Members whose articles are published in the *AppleWorks Forum*, receive a one-year extension to their NAUG membership.

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2. If possible, send both paper and disk copies of notes and articles. All disk copies should be AppleWorks files on 5.25-inch disks. If you do not submit a printed copy, please include a note describing what is on the disk.
3. All submissions to the *AppleWorks Forum* should include your name, address, and telephone number. We will cite you as the author of the letter, note, or article, but will not include your address or telephone number unless you specifically request that those be published. The Editor will make any necessary editorial changes to your submission. Mail your submission to: Cathleen Merritt, Editor; *AppleWorks Forum*; Box 87453; Canton, MI 48187

## Seminar Schedule

NAUG sponsors AppleWorks seminars in various locations throughout the country. These seminars, entitled "AppleWorks: Beyond the Basics", are intended for AppleWorks users who want to solve AppleWorks problems and learn new techniques.

Seminar schedule:

**June 28 — Batavia, NY**
**August 1 — Seattle, WA**
**August 8 — Portland, OR**
**August 10 — Denver, CO**

The presenter, Dr. Warren Williams, is a technical advisor to NAUG and a frequent contributor to the *AppleWorks Forum*. He has written more than 60 articles about AppleWorks and has conducted more than 75 AppleWorks seminars throughout the country. Write or call NAUG for more information.